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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,592	09/21/2001	Steven R. Kleiman	103.1009.09	6649

22883 7590 10/06/2004
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EXAMINER	
LE, DIEU MINH T	
ART UNIT	PAPER NUMBER
2114	

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/960,592	KLEIMAN, STEVEN R. 
	Examiner	Art Unit
	Dieu-Minh Le	2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 January 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 77-110 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 77-110 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 21 September 2001 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

DIEU-MINH LE
PRIMARY EXAMINER

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 10/18/01.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

Part III DETAILED ACTION

Specification

1. Claims 77-110 are presented for examination; claims 1-76 have been canceled.
2. The drawing is objected to because all the boxes in figure 1 need to be labeled.
3. Claims 77, 90 and 99 are objected to because of the following informalities:

As per claims 77, 90 and 99, Applicant claims a memory storing information including instructions, the instructions executable by a processor to operate a file system. However, these claims are not structured to specifically associate the executable programs instructions with the functions being performed, such that there is no doubt that the instructions performing these functions are stored on the computer readable medium. Such an association will eliminate any possible ambiguities that may lead to possible 35 U.S.C 101 problems regarding computer programs. The examiner suggests that if the applicant is trying claim a product claim, the following example is suggest:

(A computer program product comprises a computer usable medium having computer readable program code embodied on said medium

for --- said computer program product comprising:
--- code means ...)

Appropriate correction is required.

Double Patenting Rejections

4. Claims 77-110 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-75 of U.S. patent 6,317,844. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter contains obvious modifications to previous claims 1-75 of U.S. patent 6,317,844.

As to claims 77, 90 and 99, these claims include limitations of: responding to an incoming file server request, processing said file system change, and performing at said second file server, which already included in claims 1, 18, 26, 42 and 64 of U.S. patent 6,421,791. It is well settled that the omission of an element and its function [i.e., plurality of file servers] is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136, USPQ 184 (CCPA 1963). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969). Therefore, omitting various elements from the previous claimed subject matter would have been obvious to one

of ordinary skill in the art in this case since the remaining elements do in fact perform the same functions as before. Elimination/Changing of an element or its function will not serve as a basis for patentability.

In addition, Official Notice well known that computer instruction or programs are stored in memory to facilitate execution.

4. The obviousness-type double patenting rejection is a judicially established doctrine based upon public policy and is primarily intended to prevent prolongation of the patent term by prohibiting claims in a second patent not patentably distinct from claims in a first patent. *In re Vogel*, 164 USPQ 619 (CCPA 1970). A timely filed terminal disclaimer in compliance with 37 C.F.R. § 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. § 1.78(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 90 are rejected under 35 U.S.C. 102(b) as being anticipated by Ault et al. (U.S. Patent 6,192,389 hereafter referred to as Ault).

As per claim 90:

Ault explicitly teaches:

- A memory storing information including instructions (i.e., within client/server environment including file description table) [fig. 4A], the instructions executable by a processor to operate a file system [abstract, col. 4, lines 7-10], comprising steps of:
- receiving a file server request at one of a plurality of file servers and in response thereto copying a descriptor of a file system change [col. 3, lines 39-48, col. 6, lines 53-62, and col. 8, lines 58-63] into a server change memory

[fig. 1, item 116, multiple servers, col. 4, lines 13-15 and col. 8, lines 48-56];

- processing said file system change for both a first set of mass storage devices coupled to a first one of said file servers and for at least one mass storage device in a second set of mass storage devices coupled to a second one of said file servers (i.e., fig. 1, plurality of servers within a server system, multi-clients connected to daemon and servers) [col. 4, lines 27-43 and col. 8, lines 58-63].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 77-89, 91-110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ault et al. (U.S. Patent 6,192,389 hereafter referred to as Ault) in view of Beeler, Jr (U.S. Patent 5,819,020 hereafter referred to as Beeler).

As per claim 77:

Ault substantially teach the invention. Ault teaches:

- A memory storing information including instructions (i.e., within client/server environment including file description table) [fig. 4A], the instructions executable by a processor to operate a file system [abstract, col. 4, lines 7-10],

comprising steps of:

- responding to an incoming file server requested by copying a descriptor of a file system change [col. 3, lines 39-48, col. 6, lines 53-62, and col. 8, lines 58-63] to both a first file server and a second file server [fig. 1, item 116, multiple servers, col. 4, lines 13-15 and col. 8, lines 48-56];

- processing file system change at first file server while maintaining descriptor copy at second file server [col. 4, lines 27-43 and col. 8, lines 58-63];

- performing a file system change in response to a copied descriptor [col. 6, lines 6-24 and col. 8, lines 58-63].

Ault does not explicitly teach:

- a service interrupt by first file server.

However, Ault does disclose capability of:

- A client/server system including first server process and second server process (or servers, col. 4, lines 15-16] comprising capability of:

- responding and copying the descriptor associated with server processes [col. 8, lines 58-63];

- program target termination and workload broken per server processes [col. 8, lines 34-37].

In addition, Beeler explicitly teaches:

- A real time client/server back up system [abstract, fig. 8, col. 3, lines 35-55];

comprising:

- service or server failure and its recovery process via primary and secondary servers [col. 4, line 48-63].

- servers backup and recovery due to service disruption

[col. 5, lines 58-61].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to apply the *service or server failure and its recovery process via primary and secondary servers as well as servers backup and recovery due to service disruption* as taught by Beeler in conjunction with the client/server system including first server process and second server process (or servers) comprising capability of responding and copying the descriptor associated with server processes (or servers) as disclosed by Ault in order to enhance the memory storage performance, more specifically to ensuring the memory location error detected, corrected, and replaced in proper and efficient manner within the file server via file descriptor. One of ordinary skill in the art would have been motivated to do so to improve the memory location, memory access, memory availability and memory integrity.

As per claims 78:

Ault further teaches:

- the instructions further include steps of associating a first file server and a second file server with a mass storage element [col. 1, lines 22-26 and col. 4, lines 14-15].

Ault does disclose capability of:

- the instructions further include steps of associating a first file server and a second file server with a mass storage element [col.9, lines 50-55].

As per claims 79-80 and 84:

Ault further teaches:

- delaying output by file server to mass storage system without delaying a response to file system (i.e., enqueueing and dequeuing process within servers) [col. 10, lines 8-22];
- file server is disposed for leaving file storage system in an internally consistent state after processing each file system change [col. 4, lines 27-43 and col. 8, lines 58-63];
- file server respond to a file system change before committing a result of file system change to mass storage (i.e., from a single entity to all resource allocation process) [fig. 4b, col. 6, lines 19-39].

Ault does disclose capability of:

- delaying output by file server to mass storage system without delaying a response to file system (i.e., queuing process within servers) [col. 5, lines 14-27].

As per claims 81-83:

Ault substantially teach the invention. Ault teaches:

- A memory storing information including instructions (i.e., within client/server environment including file description table) [fig. 4A], the instructions executable by a processor to operate a file system [abstract, col. 4, lines 7-10],

comprising steps of:

- responding to an incoming file server requested by copying a descriptor of a file system change [col. 3, lines 39-48, col. 6, lines 53-62, and col. 8, lines 58-63] to both a first file server and a second file server [fig. 1, item 116, multiple servers, col. 4, lines 13-15 and col. 8, lines 48-56];

Ault does not explicitly teach:

- a service interrupt by second file server.

However, Ault does disclose capability of:

- A client/server system including first server process and second server process (or servers, col. 4, lines 15-16] comprising capability of:
 - responding and copying the descriptor associated with server processes [col. 8, lines 58-63];

- program target termination and workload broken per server processes [col. 8, lines 34-37].

In addition, Beeler explicitly teaches:

- A real time client/server back up system [abstract, fig. 8, col. 3, lines 35-55]; comprising:
 - service or server failure and its recovery process via primary and secondary servers [col. 4, line 48-63].
 - servers backup and recovery due to service disruption [col. 5, lines 58-61].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to apply the service or server failure and its recovery process via primary and secondary servers as well as servers backup and recovery due to service disruption as taught by Beeler in conjunction with the client/server system including first server

process and second server process (or servers) comprising capability of responding and copying the descriptor associated with server processes (or servers) as disclosed by Ault in order to enhance the memory storage performance set forth as described in claim 77, **supra**.

As per claims 86-88:

Ault further teaches:

- file server change memory including
 - a disk block (i.e., client/server memory table/disk block) [col. 1, lines 22-26 and col. 4, lines 14-15].
 - a file server request [col. 18, lines 52-64];
- file server change memory is disposed to delay output to mass storage element without delaying a response to file server request (i.e., enqueueing and dequeuing process within servers) [col. 10, lines 8-22].

Ault does disclose capability of:

- file server change memory including
 - a disk block [col. 9, lines 30-49 and col. 11, lines 1-10].
 - a file server request [col. 8, lines 58-63]

- file server change memory is disposed to delay output to mass storage element without delaying a response to file server request (i.e., queuing process within servers) [col. 5, lines 14-27].

As per claims 85 and 89:

Ault further teaches:

- file servers [fig. 1, item 116, multiple servers, col. 4, lines 13-15 and col. 8, lines 48-56];
-- using local memory access [fig. 1];
-- using remote memory access [col. 3, lines 60-64].

Ault does not explicitly teach:

- a portion of file server change memory.

However, Ault does disclose capability of:

- A client/server system including first server process and second server process (or servers, col. 4, lines 15-16] comprising capability of:
- responding and copying the descriptor associated with server processes [col. 8, lines 58-63];

In addition, Beeler explicitly teaches:

- A real time client/server back up system [abstract, fig. 8, col. 3, lines 35-55];

comprising:

- file servers [fig. 5],

-- using local memory access [col. 5, lines 58-61];

-- using remote memory access [col. 6, lines 44-51];

- target computer (or server) when mirroring initiated,
only those block that have change (i.e., a portion of file
server change memory) shall be copied to the target
computer (or server) [col. 6, line 65-67].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to apply the target computer (or server) when mirroring initiated, only those block that have change (i.e., a portion of file server change memory) shall be copied to the target computer (or server) as taught by Beeler in conjunction with the client/server system including first server process and second server process (or servers) as disclosed by Ault in order to control the memory mapping or mirroring to its specific memory block or memory portion of the file server. One of ordinary skill in the art would have been motivated to do so to improve

the memory copying/accessing duration to and from local and remote locations as well as to improve data throughput process.

As per claims 91-98:

These claims are similar to 78-89. The only minor different is that claims 91-98 introduce a plurality of file servers instead of a first file server and a second file server as described in claims 78-89. Therefore, these claims are also rejected under the same rationale applied against claims 78-89. In addition, all of the limitations have been noted in the rejection as per claims 78-89.

As per claims 99-110:

These claims are similar to 77-89. The only minor different is that claims 99-110 introduce a plurality of file servers instead of a first file server and a second file server as described in claims 77-89. Therefore, these claims are also rejected under the same rationale applied against claims 77-89. In addition, all of the limitations have been noted in the rejection as per claims 77-89.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. A shortened statutory period for response to this action is set to expire THREE (3) months, ZERO days from the date of this letter. Failure to respond within the period for response will cause the application to be abandoned. 35 U.S.C. 133.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (703) 305-9408 [NOTE: After approximately October 15, 2004, I can be reached at the new number (571) 272-3660]. The examiner can normally be reached on Monday - Thursday from 8:30 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**DIEU-MINH THAI LE
PRIMARY EXAMINER
ART UNIT 2114**

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9/30/04